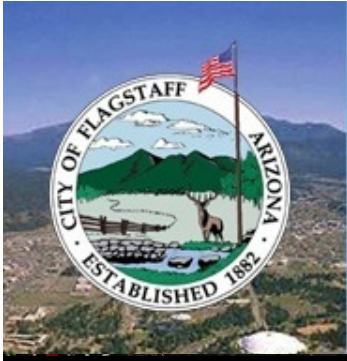


# Discussion on Water Policies Water Adequacy

*Utilities Division*  
*Bradley M. Hill, R.G.*  
*Utilities Director (Interim)*  
*Water Resources Manager*

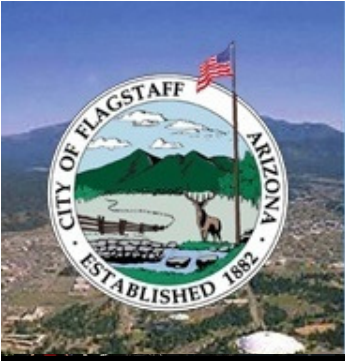
City Council Work Session  
July 12, 2011



# Policy Overview

- Regional Plan – Water Element
- Utilities Water Policies
- Utilities Programs & Procedures
- Utilities Annual Budget

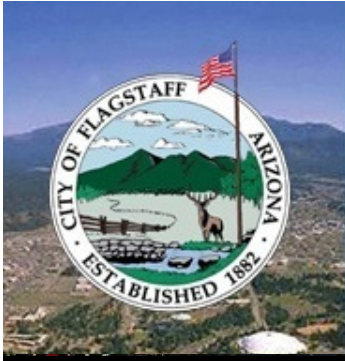




# Policy Process

- Staff submit Policy to Council
- Council provides direction
- Staff re-submit same Policy with revisions, “final” direction
- When all Policies considered by Council – bring back entire document for consideration & approval





# Policy - Water Adequacy

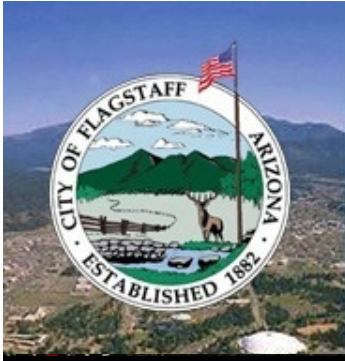
## Policy Question:

Should the City of Flagstaff adopt a policy requiring, at a minimum, knowing whether there is a 100-year water supply available for existing citizens and the anticipated new development?

*“Consumer Protection”*

Goal: Obtain Council guidance & feed back



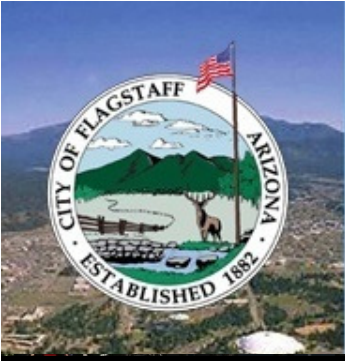


# Arizona Water Management Programs

More Stringent  
↓

- ☞ **Water Adequacy “Permissive”**  
– 1973
- ☞ **Water Adequacy “Mandatory”**  
– 2007 (SB 1575 and HB 2692)
- ☞ **Assured Water Supply**  
– 1995





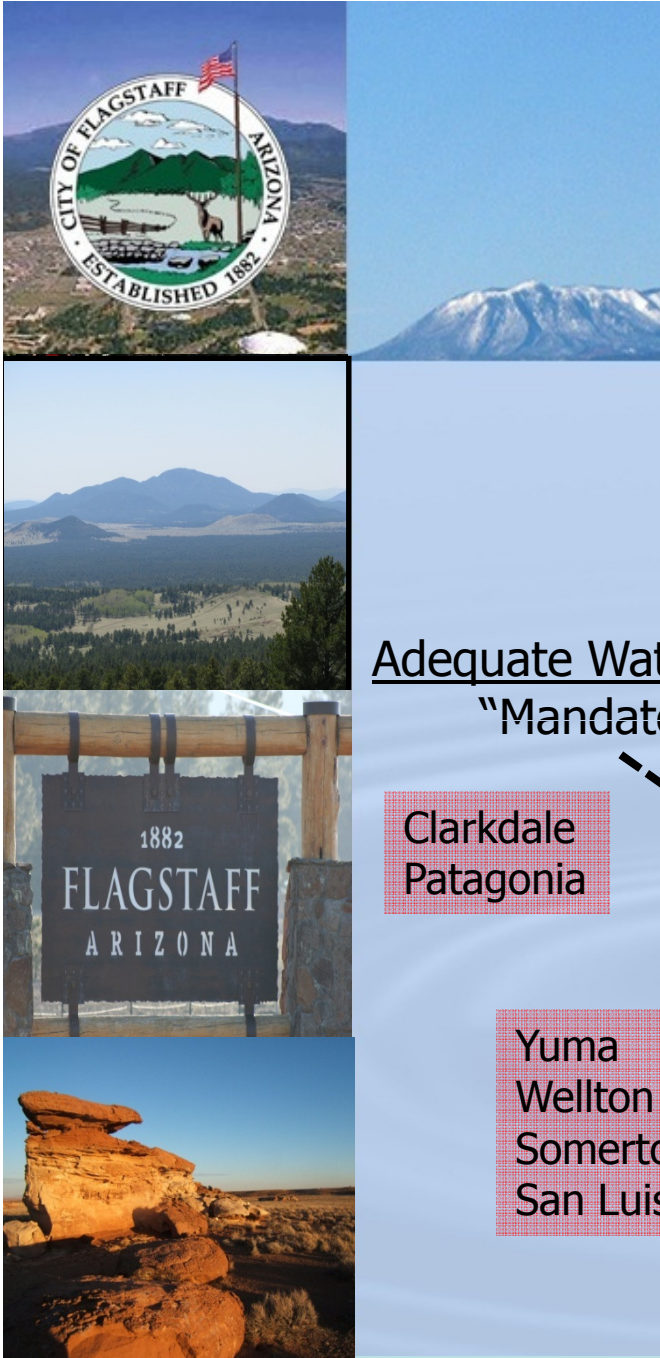
# Criteria for Water Adequacy

- Physical Availability (*Hydrology or Wet Water*)
  - Continuous Availability (*infrastructure*)
  - Legal Availability (*water rights & contracts*)
  - Financial Capability
- Water Quality (US EPA & ADEQ)

City's Designated as having an Adequate Water Supply:  
ADWR requires look 100 years into future,  
must renew every 10 years





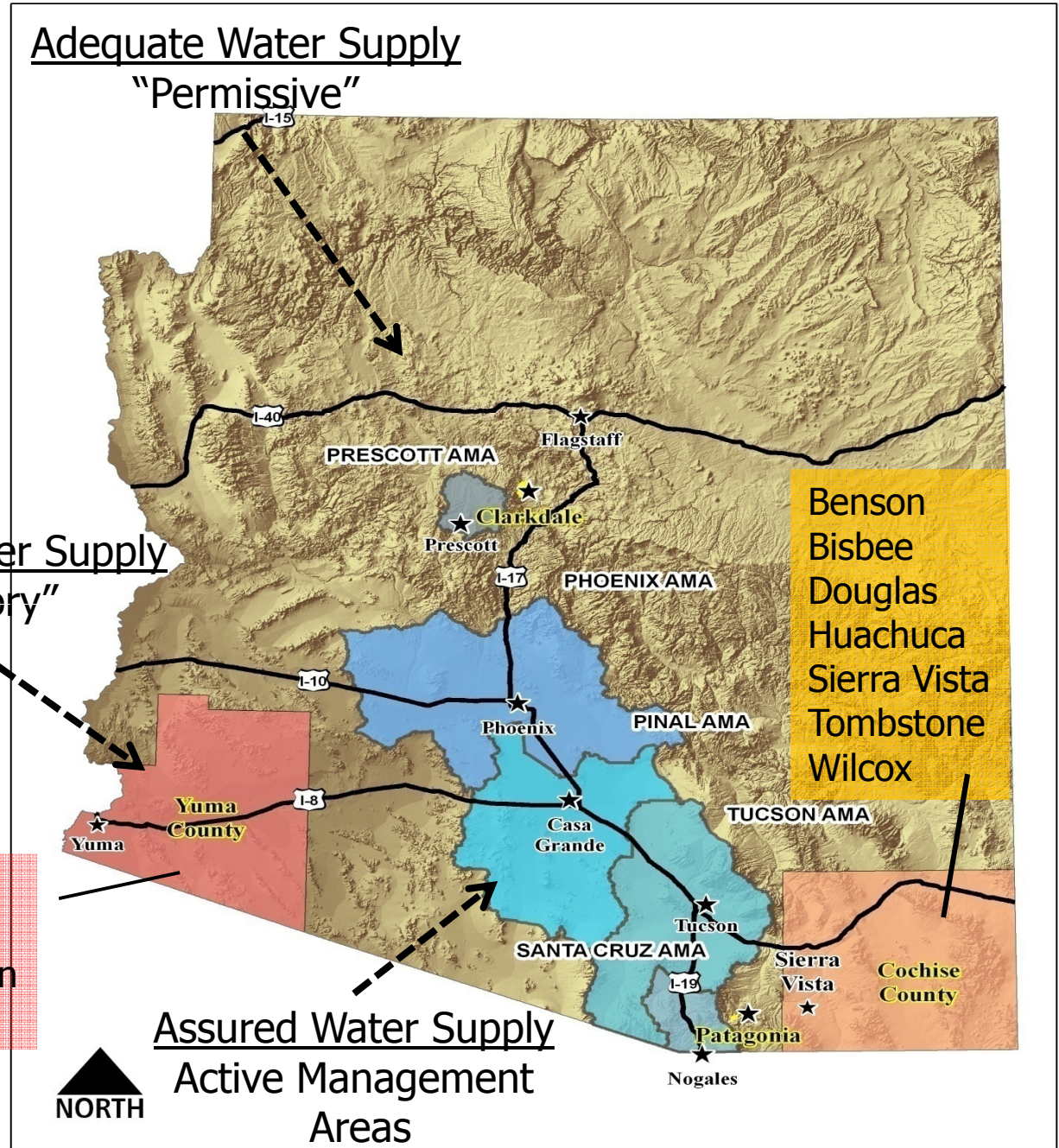


## Adequate Water Supply "Permissive"

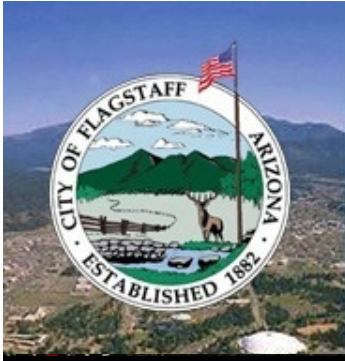
## Adequate Water Supply "Mandatory"

Clarkdale  
Patagonia

Yuma  
Wellton  
Somerton  
San Luis



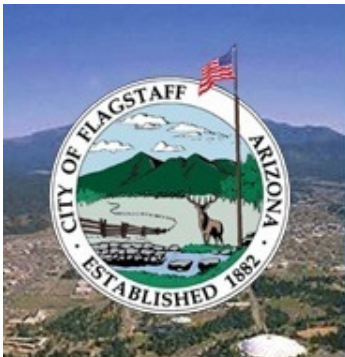




# Timeline for northern Arizona

- 2008-09, ADWR and Coconino County held Stakeholder meetings *City was directly involved*
- 2008-09 ADWR Updating Rules – Hydrologic Guidelines for C & R Aquifers of northern Arizona  
(*City was directly involved along with USGS & NAU*)
- Spring 2009 – new Governor Brewer moratorium on State Agency rule making
- Summer 2009 - City asked County to wait until we define our "*100-year Bucket of Water Supplies*"
- January 2010 – City hires national hydrology firm develop a computerized groundwater model

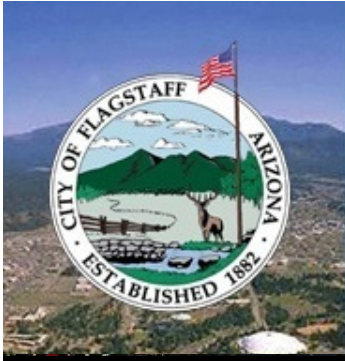




# ***Flagstaff Designations***

- City of Flagstaff Incorporated Limits
  - “deemed” Adequate in May 17, 1973
  - Never required to prove Physical Availability
  - Currently undertaking “Sustainability Study”
- City of Flagstaff Red Gap Ranch
  - January 7, 2011
  - Hydrology study proved up to 16,500 AF/year
  - Requires City to submit hydrology study for local water supplies by January 2012



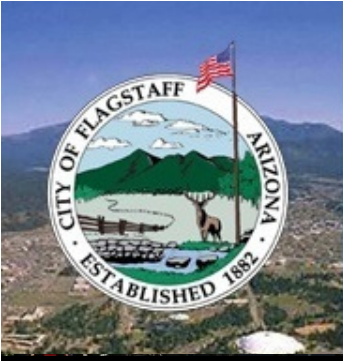


# Water Commission Input

- June 2011 - - Policy language  
*(unanimous approved)*
- April 2011 - - Policy language
- October 2010
- August 2009
- March 2009
- August 2008

*Strategy B.2.2f - Time Limit was their primary focus of discussion*





# Policy B2 – Water Adequacy

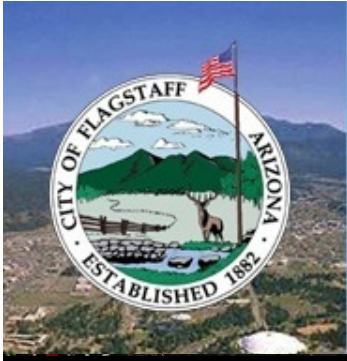
## Purpose:

Maintain the City's two Designations to ensure all existing citizens, new committed plats and future projected growth has a minimum 100-year water supply.

## Benefits:

Maintain public's trust in the City's water supplies and provide for long-term economic vitality and community sustainability

Requirement to access any state-wide funding



# Policy B 2.2: Adequate Water Supply Program

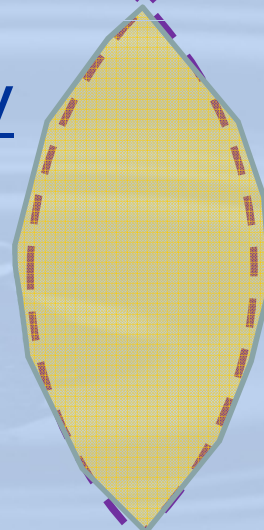
*Develop a water management program that will comply with a 100-year Adequate water supply before approving development*

## Water Adequacy

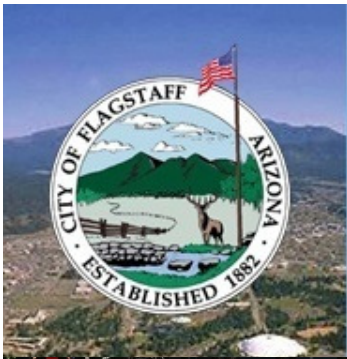
Physical (*hydrology*)  
Legal (*paper*)  
Continuous (*infrastructure*)  
Financial capability  
Water quality

## Development

- # of units  
- Volume of water required at build-out

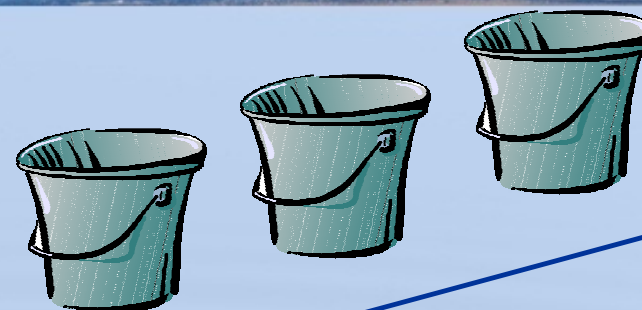
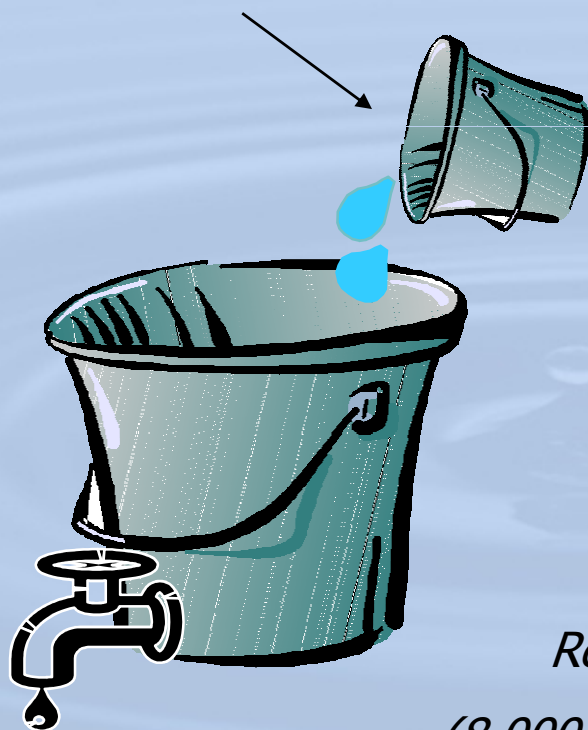






# Strategy B.2.2a: Determine Flagstaff's "Bucket" of Water Supplies

Locally Derived Water Supplies



Locally Derived – Sustainability Study

- Groundwater computer model
- Surface water & Reclaimed water

Additional Groundwater

*Red Gap Ranch – 16,500 AF/year*

*(8,000 AF/year Navajo – Flagstaff Stipulation)*

# UTILITIES INTEGRATED MASTER PLAN

Water Resources Chapter  
Water History, Demand, Existing Supplies  
and Future Water Needs and Recommended Options



April 8, 2011

City of Flagstaff - Utilities Division

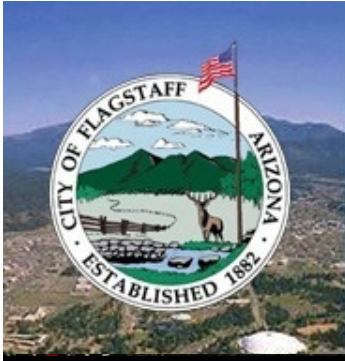


DRAFT

## Strategy 2.2b: estimate long-term water needs

1. Scenario Planning
2. Population Projections  
Historical & slow growth  
Slow growth  
Climate change impacts  
Water Conservation
3. Water Needs based upon  
Regional Plan land uses





# *Strategy B.2.2.c: Water Resource Allocation*

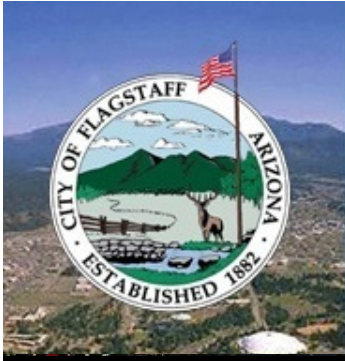
## First Come : First Serve

(reservation of “paper water”)

Date of “Commitment”: based upon Final approved subdivision plat by City Council – state law

Major / Minor Amendments to Regional Plan  
Zoning Map Amendments





## *Strategy B.2.2.f: Performance Criteria*

Time Limit?: For example: development must obtain Building Permit within 5 years...ability to extend given specific criteria?

*(Sewer Impact Analysis is held for 2 years)*

Purpose of time limit?: would prevent a large development from locking-up “paper” water supplies.

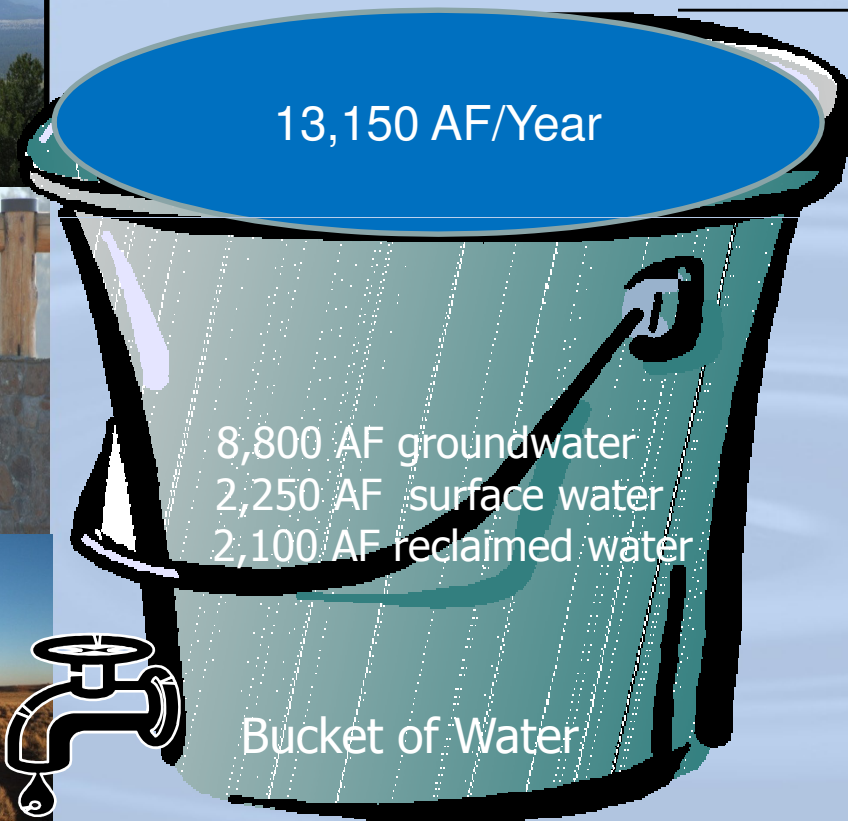






# Strategy B.2.2.e: Tracking Water Resource Allocation v. “Committed” Development

*example*

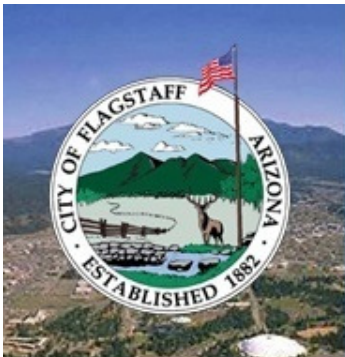


Available to commit  
2,326 AF/year

Committed  
584 AF/year

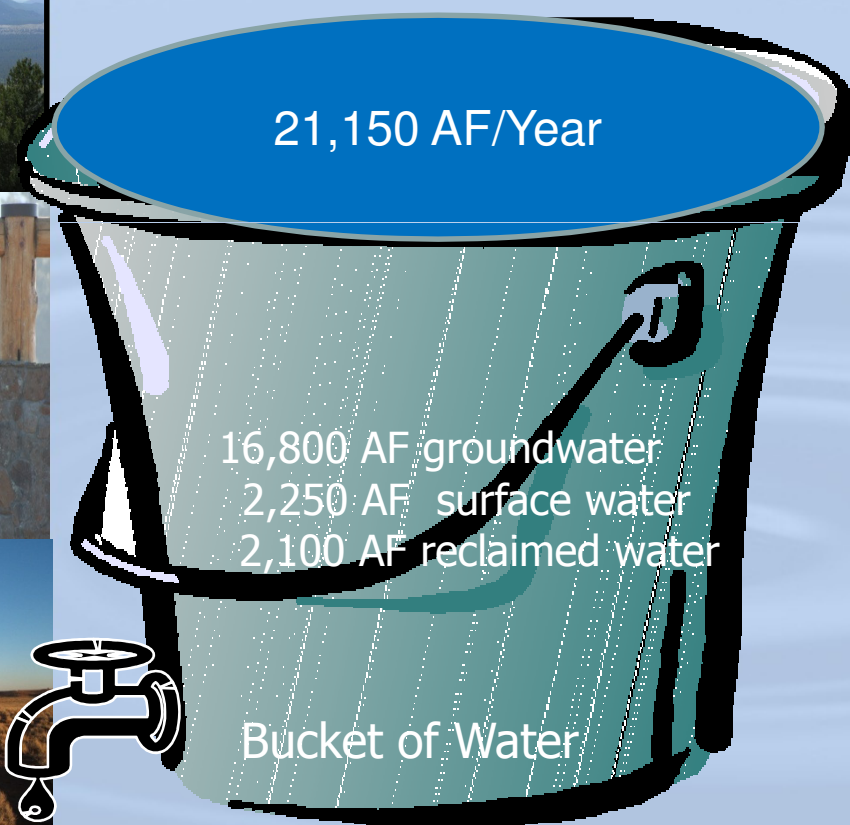
Current  
10,240 AF/year

*Water Demands*



# Strategy B.2.2.e: Tracking Water Resource Allocation v. “Committed” Development

*example*



Add Red Gap Ranch

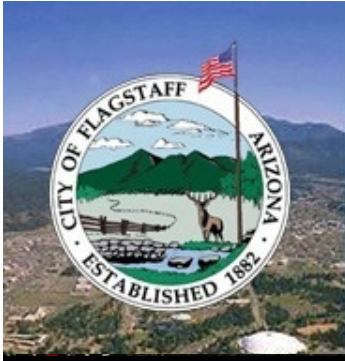
Available to commit  
10,326 AF/year

Committed  
584 AF/year

Current  
10,240 AF/year

*Water Demands*





**QUESTIONS?**